

INNOVATOR

Accelerating Innovation for the American Driving Experience

Vermont Sets Stainless Standard for Bridges

One goal of the Highways for LIFE initiative is to move innovations into standard practice. Now, that's happening in Vermont, thanks in part to a 2009 Highways for LIFE demonstration project. In March, the Vermont Agency of Transportation made stainless steel reinforcing standard

Credit: Vermont Agency of Transportation



Crews used stainless steel rebar to reinforce a bridge superstructure on a Highways for LIFE project in Vermont.

for bridge superstructures on high-traffic pavements, replacing epoxy-coated steel.

"I won't say that this new standard is only a result of that demonstration bridge, but that was definitely included in our thinking," said Wayne Symonds, structures design engineer for the Vermont agency. "That 2009 project ended up proving that we can get stainless steel, and we believe it's very cost-effective."

In the demonstration project, the agency replaced a \$2.84 million bridge that carries U.S. Highway 2 over the Winooski River in East Montpelier. It was designed as a very-low-maintenance bridge. The superstructure has five weathering steel girders (no paint), with a bare concrete deck of high-performance concrete (no membrane or overlay) and stainless steel rebar.

Vermont now specifies three levels of superstructure reinforcing for bridges. For Levels 1 and 2, which include nonpaved roads or roads not on the National Highway System, epoxy-coated reinforcing steel is permitted. Level 3, where stainless steel reinforcement is required,

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All-Weather Pavement Marking System Gets Work Zone Test

A pavement marking system designed to make it easier for drivers to navigate work zones when it's dark and rainy got its first real-world test on construction projects under the Federal Highway Administration's Technology Partnerships Program.

Traditional pavement markings can be hard to see in inclement weather, making it tricky for drivers to find their way through unfamiliar work zones. The idea behind the 3M™ All-Weather Paint for work zones, developed by 3M of St. Paul, Minn., is to make driving lanes more visible,

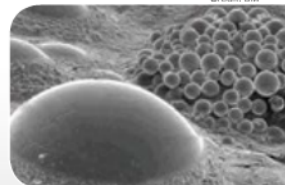
enhancing safety for both motorists and construction workers.

The company used a grant from the Technology Partnerships Program to refine the pavement marking system and evaluate it in cooperation with highway agencies.

The program, part of FHWA's Highways for LIFE initiative to accelerate use of highway innovations, offers competitive grants to industry to develop prototype technologies with potential to improve highway safety or quality or reduce congestion.

The all-weather pavement marking system combines high-build waterborne paint and glass beads that provide good

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The all-weather paint system combines typical glass beads with optical elements made of a ceramic core surrounded by high-refractive-index beads that provide retroreflectivity under wet conditions.

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